

**Remarks**

Claims 1, 8-9, 16-17, 24 have been amended and claims 25-26 have been newly added. Reconsideration and allowance of the pending claims are respectfully requested.

**Specification objection**

The Office Action requested Applicant to add a Summary of the Invention description to the application. However, Applicant kindly points out that both the MPEP and 37 C.F.R. §1.73 do not require the presence of a "Summary of the Invention." They merely indicate where in the application the "Summary of the Invention" should be placed if Applicant chooses to add one. 37 C.F.R. §1.73 only states that a "Summary of the Invention" should or may be included. It does not state "must" or "shall." Accordingly, Applicant has elected not to include a "Summary of the Invention" as this is within the discretion and right of the Applicant.

**Claim objection under 35 U.S.C. 112**

The Office Action rejected claims 8, 16, and 24 due to insufficient antecedent basis for the limitation 'the natural language processing rules' in the claim. Applicant has amended claims 8, 16 and 24 to overcome the above deficiency.

**Claims Rejections Under 35 U.S.C. 103(a)**

**Claims 1-4, 6-9, 11-17, 18-20 and 22-24**

The Office Action rejected claims 1-4, 6-9, 11-17, 18-20 and 22-24 under 35 U.S.C. 103 as being unpatentable over Razin et al. (US PAT. 6,098,034). Applicant respectfully requests the rejection of claims 1-4, 6-9, 11-17, 18-20 be withdrawn for the following reasons.

As discussed in M.P.E.P 2143.03, to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Each of claims 1, 9 and 17 comprise filtering the set of frequently occurring phrases to determine a set of frequently occurring and unrecognized phrases as entity name and jargon term candidates.

Razin teaches a method of standardizing phrases in a document, comprising two major phases: first, establishing a master phrase list by using suffix tree; second, finding phrases in the document that are approximate to the master phrase and editing the approximate phrases and/or master phrases to standardize phrases in the document. In the first phase, master phrases that meet two criteria are determined, i.e., **phrase length and phrase occurring frequency** (including independent occurring frequency for nested phrase) (Col. 4, lines 62-63). Moreover,

although Razin disregards dangling words (such as conjunctions, prepositions, etc.) when determining a phrase length so as to avoid leaving meaningless phrases in the master phrase list, the phrases (such as 'and whereas about the' in Col. 16, line 65) are discarded because of not meeting the length requirement, but not because of being unrecognized (Col. 17, lines 2-6 with respect to stop list). On the other hand, the dangling words themselves are recognized, for example, 'and', 'about' are recognized words. In second phrase, a dictionary made up of the master phrases obtained in the first phrase is used to search for phrases in the document that are approximate with the master phrases. Therefore, the approximate phrases are determined because they are recognized by the dictionary, but not because they are unrecognized and frequently occur in the document (Col. 5, lines 37-40, 45-48).

In view of the above, Razin does not teach to filtering the set of frequently occurring phrases to determine a set of **frequently occurring and unrecognized phrases as** entity name and jargon term candidates, and thus, does not teach or suggest all of the limitations in claims 1, 9 or 17 of current invention. Applicant respectfully request the present rejection of claims 1, 9 and 17 be withdrawn.

Each of claims 2-8, 10-16 and 18-24 includes one of claims 1, 9 and 17 as a base claim. Accordingly, each of claims 2-8, 10-16 and 18-24 is at least allowable for the reasons noted above.

In addition, the Office Action took official notice that the more frequent a word is found the more meaning the word would have in the document is well known in the art. Based on this official notice, the Official Action reasoned that it would have been

obvious to one of ordinary skill in the art at the time of the invention to modify the system of Razin to extract the entity names from the set of frequently occurring phrases because it would allow only the “most” meaningful entity names to be extracted. However, this reasoning is flawed in at least two respects.

First, it is not well known in the art that the more frequent a word is found the more meaning the word would have in the document. The proposition is not even true. Common used words such as “a,” “the,” “with,” “of”, etc. are likely the most frequently used words found in a given document. Yet these words provide very little substantive meaning in a document. As discussed in M.P.E.P. 2144.03, if the applicant traverses an assertion of the official notice, the examiner should cite a reference in support of his or her position. In view of this, Applicant respectfully requires the Examiner to cite a reference to support the official notice.

Second, the Official Action indicates that one skilled in the art would be motivated to make the combination since it would allow ***only the “most” meaningful entity names*** to be extracted. However, the invention as claimed in claims 1, 9 and 17 filters a set of frequently occurring phrases to determine entity name and jargon term candidates. There is no indication of determining the “most” meaningful entity names, but merely determining entity name and jargon term candidates. Basically, there appears to be an absence of any teaching in the cited art regarding determining entity name and jargon term candidates of a text corpus let alone determining such entity name and jargon term candidates using the process defined in claims 1, 9, and 17.

*Claims 5, 13 and 21*

The Office Action rejects claims 5, 13 and 21 under 35. U.S.C. 103 as being unpatentable over Razin et al. in view of Chien ("PAT-Tree-Based Keyword Extraction for Chinese Information Retrieval"). Each of claims 5, 13 and 21 include one of claims 1, 10 and 17 as a base claim and are therefore allowable for at least the reasons stated above. Applicant respectfully requests the present rejection of claims 5, 13 and 21 be withdrawn.

**Conclusion**

The foregoing is submitted as a full and complete response to the Official Action. Applicant submits that the application is in condition for allowance. Reconsideration is requested, and allowance of the pending claims is earnestly solicited.

Should it be determined that an additional fee is due under 37 CFR §§1.16 or 1.17, or any excess fee has been received, please charge that fee or credit the amount of overcharge to deposit account #02-2666. If the Examiner believes that there are any informalities, which can be corrected by an Examiner's amendment, a telephone call to the undersigned at (503) 439-8778 is respectfully solicited.

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Respectfully submitted,



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